

REMARKS

Claims 6, 7, 13-20, and 23-43 are active in the present application. Claims 1-5, 8-12, 21 and 22 have been cancelled. Claims 24-43 are new claims. Claims 24-43 are currently under active prosecution. Support for new claim 24 is found on page 5, lines 25-28. Support for new Claim 25 is found in original Claim 6. Support for new Claim 26 is found on page 4, lines 4. Support for new Claim 27 is found on page 5, line 28. Support for new Claim 28 is found in original Claim 5. Support for new Claim 29 is found in original Claim 11. Support for new Claim 30 is found on page 4, lines 1-8. Support for new Claim 31 is found in original Claim 8. Support for new Claim 32 is found in original Claim 9. Support for new Claim 33 is found on page 5, lines 8-13. Support for new Claim 34 is found on page 5, line 14. Support for new Claim 35 is found on page 8, lines 29-31. Support for new Claim 36 is found on page 5, lines 28-31. Support for new Claim 37 is found on page 6, lines 25-26. Support for new Claim 38 is found on page 6, lines 25-26. Support for new Claim 39 is found on page 7, lines 1-4. Support for new Claim 40 is found on page 8, lines 9-10. Support for new Claim 41 is found on page 8, line 10. Support for new Claim 42 is found on page 9, line 1. Support for new Claim 43 is found on page 9, line 2.

REQUEST FOR RECONSIDERATION

Applicants thank Examiner Hendrickson for the helpful and courteous personal interview of March 28, 2002. During the personal interview the use of the claimed adsorbent was discussed with regards to the claimed adsorbent's ability to remove organic materials from aqueous environments.

The present application describes the use, such as in remediating oil spills, of pulverulent rubbers as adsorbents for hydrocarbon based materials. The presently claimed pulverulent rubber-containing adsorbents are particularly suitable for the adsorption of nonpolar organic compounds that are poorly soluble in water (page 9, lines 11-12).

The ability of the presently claimed pulverulent rubber-containing adsorbents to adsorb hydrocarbon based materials is demonstrated in Figures 1 and 2. In Figure 2 the adsorbance characteristics of a pulverulent rubber that contains carbon black is compared against conventional activated carbon (activated carbon is commonly used as an adsorbent for removing organic chemicals from aqueous systems). It is evident from Figure 2 that the presently claimed pulverulent rubber-containing adsorbent provides superior adsorption characteristics. For example, it is shown that the pulverulent rubber is able to achieve a higher toluene load (i.e., amount of toluene adsorbed per gram of adsorbent). The toluene load for the claimed adsorbents is more that double that of activated carbon at higher equilibrium concentrations of toluene.

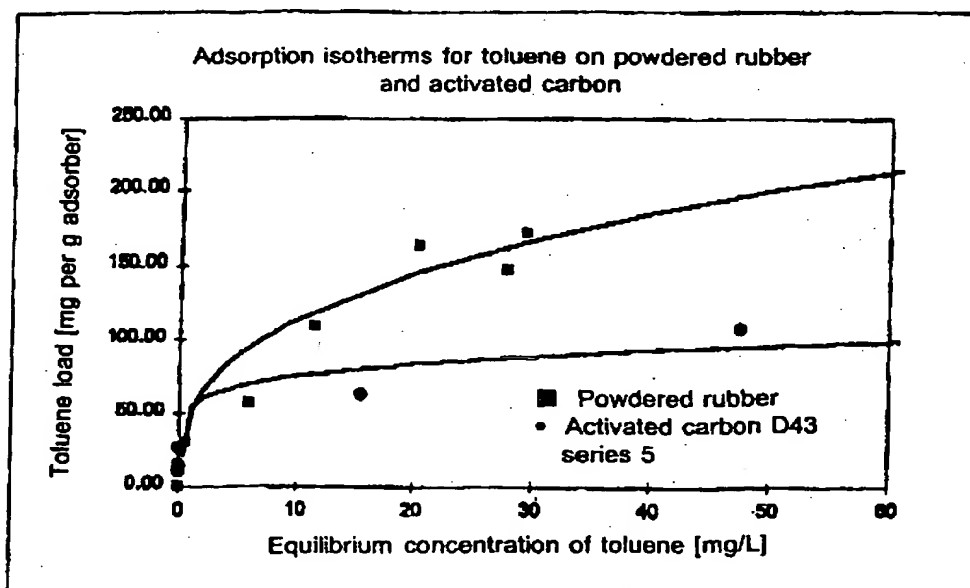


Fig. 2: Adsorption isotherms for toluene on powdered rubber and activated carbon

Original Claims 1-5, 8-12, 21 and 22 have been canceled. Claims 24-43 are new claims. The new claims are drawn to a carbon black-containing adsorbent wherein the carbon black is a furnace black, gas black or flame black with an iodine adsorption value of from 25 to 1200 m²/g.

Original Claims 1, 3-5, 12, 21 and 22 were rejected under 35 U.S.C. §102(b) as anticipated by, or in the alternative under 35 U.S.C. §103(a) as obvious over a patent to Wolff et al (U.S. Patent No. 5,116,886).

The Wolff et al patent is drawn to a method for producing fillers modified with organosilicone compounds (see the Title, Abstract and Claims). The Wolff et al patent does not disclose or describe the preparation of adsorbents containing pulverulent rubber and carbon black fillers. In contrast, the presently claimed invention requires the presence of a specific carbon black (gas black, furnace black or flame black - see Claim 1), in an amount of from 100 to 5000 parts per hundred parts rubber (see Claim 1) in pulverulent rubber. Moreover, in the presently claimed invention the carbon black must exhibit a specific iodine adsorption value (from 25 to 1,200 m²/g - see Claim 1). None of these presently claimed limitations are disclosed in the patent. Therefore the patent does not anticipate the presently claimed invention.

The patent makes no attempt to measure or optimize the ability of the prior art silicate fillers to adsorb organic chemicals from an aqueous environment. The patent does not suggest that improved adsorption performance can be obtained from compositions comprising pulverulent rubber and the claimed carbon blacks. The adsorption capabilities of the fillers, either alone or when present as a mixture with rubber, is nowhere mentioned in the patent. The patent cannot therefore render the presently claimed invention obvious.

Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a).

Claims 1-5, 10-12, 21 and 22 were rejected under 35 U.S.C. §102(e) as anticipated by or in the alternative under 35 U.S.C. §103(a) as obvious in view of a patent to Goerl et al (U.S. Patent No. 6,340,724).

The present application (09/580,526) and U.S. Patent No. 6,340,724 (Goerl et al.) were commonly owned at the time the invention of application 09/580,526 was made. The Goerl reference is therefore disqualified as prior art.¹

Applicants respectfully request the withdrawal of the rejection under 35 U.S.C. §102(e)/35 U.S.C. §103 in view of Goerl.

The amendment to the claims obviates the rejections under 35 U.S.C. §112.

An Information Disclosure Statement was submitted to the Office on August 30, 2000, together with a Form PTO-1449. A signed and initialed copy of the Form PTO-1449 was not returned with the Office Action of February 7, 2002. Applicants respectfully request that a signed and initialed copy of the Form PTO-1449 be returned with the next communication from the Office. A copy of the Form PTO-1449 is attached herewith for the Examiner's convenience.

¹Effective November 29, 1999, subject matter which was prior art under former 35 U.S.C. §103 via 35 U.S.C. §102(e) is now disqualified as prior art against the claimed invention if the subject matter and the claimed invention "were, at the time the invention was made, owned by the same person or under an obligation of assignment to the same person." MPEP §706.02(1)(1).

It is respectfully submitted that this amendment to the claims places all claims in condition for allowance. Applicants thus respectfully request the withdrawal of the outstanding rejections, and the passage of all now pending claims to Issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Attorney of Record
Registration No. 24,618

Stefan U. Koschmieder, Ph.D.
Registration No. 50,238



22850

(703) 413-3000
Fax #: (703) 413-2220
SUKOS/smi

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OF AMENDMENT AND REQUEST FOR RECONSIDERATION

IN THE CLAIMS

Claims 1-5, 8-12, 21-22 (Cancelled).

Claims 24-43 (New).

Form PTO 1449
(Modified)U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
192376US0SERIAL NO.
09/580,526

LIST OF REFERENCES CITED BY APPLICANT

TRADE MARK OFFICE
APPLICANT

Uwe ERNST, ET AL.

FILING DATE
MAY 30, 2000

GROUP

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPROPRIATE |
|---------------------|----|--------------------|----------|-------------------|-------|--------------|-------------------------------|
| | AA | 4,778,231 | 10/18/88 | SEIDLER, ET AL. | | | |
| | AB | 4,883,829 | 11/28/89 | SMIGERSKI, ET AL. | | | |
| | AC | | | | | | |
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FOREIGN PATENT DOCUMENTS

| | | DOCUMENT NUMBER | DATE | COUNTRY | TRANSLATION | |
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OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

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Examiner

Date Considered

*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.